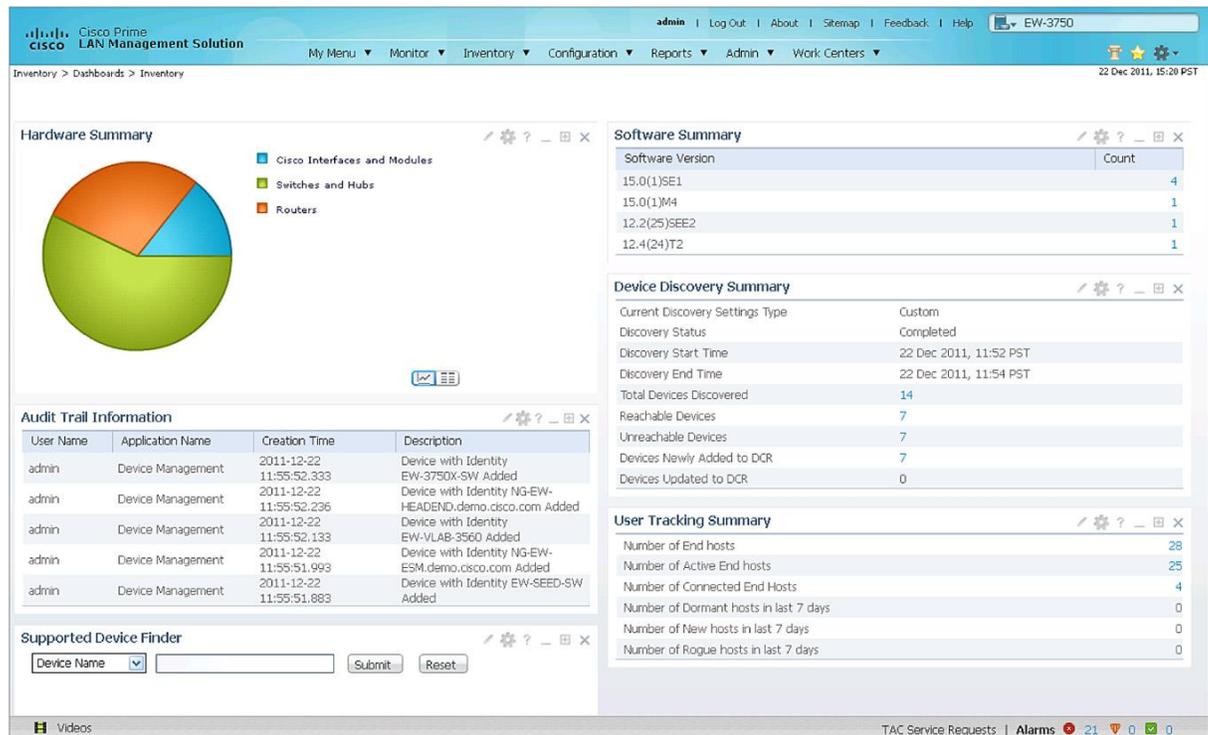


Cisco Prime LAN Management Solution 4.2

Product Overview

Cisco Prime™ LAN Management Solution (LMS), offered as part of Cisco Prime Infrastructure, delivers powerful network lifecycle management by simplifying the configuration, compliance, monitoring, troubleshooting, and administration of Cisco® networks. This innovative solution offers end-to-end management for business-critical technologies and services, such as medianet, Cisco TrustSec™, and Cisco EnergyWise™. Cisco Prime LMS improves the overall user experience, providing new workflows that are built on functional partitioning and that align the product with the way network operators do their jobs. Once installed, prepackaged monitoring and troubleshooting dashboards provide actionable information to quickly isolate and fix network problems before they affect services. Additionally, an upgradable and customizable compliance engine checks device configurations against a broad variety of regulatory, IT, corporate governance, and technology policies. Configuring and deploying updates to the network has been made easier with the Template Center, which incorporates Cisco Smart Business Architecture (SBA) templates that are based upon Cisco validated designs, simplifying platform and technology rollout and reducing the chance for errors. Work centers provide a single area where guided workflows give step-by-step instructions to help operators quickly provision, monitor, and manage new Cisco value-added technologies and solutions, such as medianet, Cisco EnergyWise, Cisco TrustSec, Auto Smartports, and Smart Install. See Figure 1.

Figure 1. Cisco Prime LMS 4.2



About Cisco Prime and Cisco Prime Infrastructure

Cisco Prime for Enterprise is an innovative strategy and portfolio of management products that empower IT departments to more effectively manage their networks and the services they deliver. Cisco Prime is built upon a network services management foundation and a set of common attributes. It delivers an intuitive workflow-oriented user experience across Cisco architectures, technologies, and networks. Cisco Prime simplifies network management, improves operations efficiency, reduces errors, and makes the delivery of network services more predictable. For more information about Cisco Prime, please visit <http://www.cisco.com/go/prime>.

Cisco Prime Infrastructure 1.1 bundles campus switch, branch, core routing, and wireless LAN management into a single, easy-to-order solution that enables businesses and enterprises unparalleled operational efficiencies and investment protection. The bundle consists of:

- [Cisco Prime LAN Management Solution](#), which delivers simplified management of Cisco® Borderless Networks and reduces operations costs by aligning network management functionality the way network operators do their jobs
- [Cisco Prime Network Control System](#), which provides complete wireless LAN management with converged user and access management, and integrated lifecycle management of branch routers

For more information about Cisco Prime Infrastructure, please visit <http://www.cisco.com/go/primeinfrastructure>.

A New Management Paradigm

Cisco Prime LMS has evolved from a collection of individual products into a seamless set of integrated management functions based upon the way network managers do their work. Organizing the product based on management function simplifies the overall user experience by reducing the need to cross application boundaries to complete a specific management task. Workflows are self-contained and all required functionality is maintained within a functional area. Table 1 lists the major functional areas.

Table 1. Cisco Prime LAN Management Solution Major Functional Areas

Functional Area	Description
Monitoring and troubleshooting	Quickly and proactively identify and fix network problems before they affect end users or services <ul style="list-style-type: none">• Proactive health and fault management• Centralized fault and event browser (consolidated syslog, and events and alarms)• Quick navigation and "hover-over" to identify problem areas• Embedded troubleshooting workflow for quick problem isolation and remediation• Simple Network Management Protocol (SNMP)-based polling to identify availability and performance issues• Medianet dashboard to provide fault and availability statistics of medianet endpoints and devices• IP service-level agreement (IP SLA) video operations to help validate whether the network is ready for video and rich-media applications• Smart Interaction for contextual Cisco service request creation and Cisco Support Community searches
Inventory	Complete and thorough inventory of all Cisco equipment details - chassis, module, interface <ul style="list-style-type: none">• Provides a single menu for discovery status, device status, user tracking, and inventory dashboards• Support for more than 600 Cisco device types• Day-one device support to allow new device packages to be downloaded the day new devices are shipped
Configuration management	Configuration backup, software image management, compliance, and change management required to maintain and update network devices <ul style="list-style-type: none">• Cisco best practices configuration templates - deploy full or partial configurations based on Cisco validated designs and Cisco Smart Business Architecture recommendations• Dynamic guided workflows to reduce chance for errors• Extensible configuration library, new updates, and configurations templates easily downloaded from Cisco.com, including the SBA templates• Integration with Cisco Configuration Professional to assist with multidevice deployment of configuration files generated by Cisco Configuration Professional through LMS configuration templates and scheduler

Functional Area	Description
Audit and compliance management	Customizable compliance engine offers extensive modeling of industry, corporate, IT, and technology policies <ul style="list-style-type: none"> • Provides visibility into network's compliance with policies • Identifies critical risks and violations • Prioritizes triage of compliance violations • Recommends fixes for a set of known violations based on best practices
Reporting	All reports are centralized in a single menu, simplifying navigation and access to detailed reports and information <ul style="list-style-type: none"> • Inventory, configuration and regulatory compliance, services and capability, user tracking, lifecycle reports such as End-of-Sale, Contract Management, Cisco Product Security Incident Response Team (PSIRT), and all other Cisco Prime LMS reports are represented in a consolidated menu. • Reports can be easily scheduled to run immediately or daily, weekly, or monthly and can be viewed online or optionally exported to a file or comma-separated value (CSV) file.
Work Centers	End-to-end lifecycle management of Cisco value-added technologies - deployment, monitoring, and management of medianet, Cisco EnergyWise, Cisco TrustSec, Auto Smartports, Smart Install <ul style="list-style-type: none"> • Getting started workflows provide simplified configuration and setup of infrastructure for supporting Cisco technologies. • Dashboards provide up-to-date status on configuration, inventory, and monitoring for troubleshooting purposes.
Administration	Getting started and improved workflows simplify application setup and administration <ul style="list-style-type: none"> • All administrative functions for setting up and configuring the application are centralized for easier access.

Using Cisco Prime LMS 4.2 to Manage Borderless Networks

The ability to manage any Cisco platform, anytime, anywhere, to deploy new Cisco technologies and services, and to integrate with third-party management platforms is key to lowering overall operating expenses (OpEx) while improving network availability. Cisco Prime LMS 4.2 will help simplify managing borderless networks in the following ways:

Reduces operating expenses: Network management has traditionally been burdened with being too complex and expensive to maintain. Required tasks such as installing management software, configuring and setting up the platform, and discovering the network, coupled with the need for multiple disparate applications with high maintenance costs, made manageability a time-consuming and expensive proposition for most enterprise customers. As a result, many customers gave up, walked away frustrated, and failed to use the features available or to realize any reduction in their overall OpEx. Cisco Prime LMS 4.2 provides a getting started guided workflow to simplify the initial setup, reducing the time required to operationalize the product. Automonitoring features help enable immediate value right out of the box, providing real-time dashboards for quickly isolating and troubleshooting network- and device-related problems immediately after the product is installed.

Simplifies deployment of new technologies: Cisco provides unparalleled value in the features and capabilities of its hardware platforms that further differentiate Cisco from the competition. Difficulties with deploying and managing differentiated features have made it challenging for some customers to take full advantage of the value. With the delivery of new Cisco switching and routing platforms, new capabilities are being introduced, such as medianet, Cisco EnergyWise, Cisco TrustSec, Smart Install, and Auto Smartports. These capabilities further differentiate Cisco from its competitors. Cisco Prime LMS simplifies deployment of these new technologies through a new concept known as Work Centers. Work Centers provide a single consolidated user experience for the deployment and complete lifecycle management of new Cisco technologies.

Provides comprehensive device coverage: To manage a borderless network effectively, device coverage is essential, no matter where the device is located. Cisco Prime LMS provides support for more than 600 different Cisco hardware platforms, from an 800 Series Router to Cisco Nexus® switches, a CRS-1, and everything in between. No other product in the industry provides the breadth and depth of support for Cisco platforms. The Cisco Prime Day-one device support program helps to ensure that when a new platform ships from Cisco, manageability support in Cisco Prime LMS is available at the same time.

Complete lifecycle management: Maintaining and managing the many services associated with a borderless network require a good foundation for dealing with the core network infrastructure and day-to-day tasks associated with lifecycle management. Cisco Prime LMS provides the functionality required to perform the day-to-day tasks, including discovery, monitoring and troubleshooting, configuration and change management, autoremediation, and inventory and compliance reporting.

Cisco Prime LMS 4.2 Features, Functions, Benefits

Table 2 lists the features, functions, and benefits of Cisco Prime LMS 4.2.

Table 2. Cisco Prime LMS 4.2 Features, Functions, and Benefits

Feature	Function	Benefit
Simplified installation and setup	<ul style="list-style-type: none"> • Flexible server OS support, including a new Linux-based virtual appliance • Unattended install • Getting started workflow • User-guided wizards • Predefined default settings • Automonitor, provides immediate “Day-one” default polling 	<ul style="list-style-type: none"> • Improves time to deploy and reduces errors typically associated with installation for quick error-free implementation • Provides immediate value with little user intervention and setup
Improved user experience	<ul style="list-style-type: none"> • Cisco Prime user interface • Expanded search feature to find device or product features quickly • Functionality-oriented navigation and operations • Navigation assistance for existing LMS users - legacy menu • User-centered workflows • Ease-of-deployment features 	<ul style="list-style-type: none"> • Intuitive simple user experience with immediate access to key management data reduces the time required to learn the product and perform frequently used tasks • Operational alignment and guided workflows provide immediate return on investment (ROI) • Comprehensive help with video on demand reduces the need for training, saving money and time required to learn the product
Extensibility	<ul style="list-style-type: none"> • Flexible web-based portal framework • Create user-defined views • Lightweight HTML interface 	<ul style="list-style-type: none"> • Helps enable end-user customization to meet operational and end-user management requirements and integration with other web-based management products
Real-time monitoring	<ul style="list-style-type: none"> • Dashboards allow for real-time performance and event monitoring • Consolidated alarm browser 	<ul style="list-style-type: none"> • Proactive notification of issues to quickly fix problems before they affect services or users
Troubleshooting	<ul style="list-style-type: none"> • Troubleshooting assistant with guided workflows • “Hover-over” details to allow quick access to additional troubleshooting tools, Telnet, Device Center, CiscoView • Smart Interactions for contextual Cisco Technical Assistance Center (TAC) case creation and Cisco Support Community interaction 	<ul style="list-style-type: none"> • Simplifies troubleshooting, reducing the time required to fix network-related issues • Fast and easy access to quickly launch other tools for problem isolation and remediation • Smartly tap into the Cisco Support Community knowledge base, streamline interactions with TAC

Feature	Function	Benefit
Configuration and compliance management	<ul style="list-style-type: none"> • Configuration archive and change management • Cisco best practices configuration templates • Dynamic guided workflows • Cisco Smart Business Architecture templates • Extensible configuration library; new updates and configurations can be added from Cisco.com • Embedded tool for creating custom configuration templates • Upgradeable to help enable regulatory compliance checks against standards such as HIPAA, SOX, IOS/IEC 27002, NSA, PCI, DHS, DISA, CIS • Industry, corporate, IT, and technology specific compliance policies 	<ul style="list-style-type: none"> • Provides complete configuration and change management, reducing error-prone tasks and quickly identifying changes to help ensure network availability • More quickly and reliably utilize Cisco best practices • Cisco validated design helps ensure integrity of configuration changes reducing the chance for error • Upgradeable to provide instant visibility into compliance violations with options to remediate
Services and lifecycle management reports	<ul style="list-style-type: none"> • Services and capability reports • Lifecycle management reports covering End of Sale/Life, Contract, and PSIRT 	<ul style="list-style-type: none"> • Gain visibility into the capability of network assets and understand the different services enabled on them • Reduces the contract management complexities and provides visibility into end-of-sale/life information for the network assets • Provides an easier way to understand and act on the devices being affected by vulnerabilities that are reported in PSIRT bulletins
Work Centers Cisco EnergyWise Cisco TrustSec Auto Smartports Smart Install Medianet	<ul style="list-style-type: none"> • Getting started - overview and initial configuration • Status and monitoring dashboard • Readiness assessment and remediation • Day-1-to-N management tasks 	<ul style="list-style-type: none"> • Simplifies the deployment of advanced Cisco technologies, reducing time and expertise required • Detailed assessment of network readiness allows for improved planning and upgrades for deploying new technologies and solutions
Comprehensive device support	<ul style="list-style-type: none"> • Detailed network inventory and management support for more than 600 Cisco platforms • Day-one device support 	<ul style="list-style-type: none"> • Provides immediate manageability for new platforms the day they ship helping enable immediate value and support for new device deployment
Open extensible framework	<ul style="list-style-type: none"> • Open Database Connectivity (ODBC) interface • Open APIs 	<ul style="list-style-type: none"> • Allows for integration with other third-party management applications • Provides open access to data for reporting and other purposes

System Requirements

Cisco Prime LMS 4.2 supports the operating systems listed in Table 3.

Table 3. System Requirements for Cisco Prime LMS 4.2

System Type	Requirements
Virtual Appliance	<p>LMS 4.2 Virtual Appliance requires one of the following virtualization systems:</p> <ul style="list-style-type: none"> • VMware ESX server 4.1 • VMware vSphere Hypervisor 4.1 (ESXi server 4.1) • VMware vSphere Hypervisor 5.0 (ESXi server 5.0) • VMware vSphere Hypervisor 5.5 (ESXi server 5.5) <p>Minimum Server Requirements for Deploying Virtual Appliances</p> <ul style="list-style-type: none"> • Cisco Prime LMS Standard Virtual Appliance (supporting up to 500 network devices): <ul style="list-style-type: none"> ◦ Processors: 2 virtual CPUs at 2.26 GHz or better ◦ Minimum RAM: 4 GB (recommended: 8 GB RAM) ◦ Minimum hard disk space allocation: 256 GB • Cisco Prime LMS Medium Virtual Appliance (supporting up to 1500 network devices): <ul style="list-style-type: none"> ◦ Processors: 4 virtual CPUs at 2.26 GHz or better ◦ Minimum RAM: 8 GB (recommended: 12 GB) ◦ Minimum hard disk space allocation: 256 GB • Cisco Prime LMS High-End Virtual Appliance (supporting more than 1500 network devices):

System Type	Requirements
	<ul style="list-style-type: none"> ◦ Processors: 8 virtual CPUs at 2.26 GHz or better ◦ Minimum RAM: 16 GB ◦ Minimum hard disk space allocation: 256 GB ◦ Able to support up to 5000 network devices for all functionalities, or up to 10,000 network devices when used for inventory, configuration, compliance, image management, and syslog management functionalities only
Software Appliance	<p>LMS 4.2 Soft Appliance version can be installed on top of the following recommended hardware:</p> <ul style="list-style-type: none"> • Cisco Prime Network Control System (NCS) appliance • Cisco Unified Computing System™ (Cisco UCS™) C250M2, C460M2 • Supports up to 5000 network devices for all functionalities, or up to 10,000 network devices when used for inventory, configuration, compliance, image management, and syslog management functionalities only
Windows	<p>LMS 4.2 supports the following Windows systems:</p> <ul style="list-style-type: none"> • Windows 2008 Server Standard Edition R1 with Service Pack 1 and Service Pack 2 • Windows 2008 Enterprise Edition R1 with Service Pack 1 and Service Pack 2 • Windows Server 2008 R2 Standard Edition • Windows Server 2008 R2 Enterprise Edition <p>Note Only 64-bit operating systems are supported on the above versions.</p> <p>Minimum Server Requirements:</p> <ul style="list-style-type: none"> • Up to 300 network devices: <ul style="list-style-type: none"> ◦ 1 CPU with dual core or 2 CPU with single core ◦ 4 GB RAM and 12 GB swap space (recommended: 8 GB RAM and 16 GB swap) ◦ 60 GB free disk space • Up to 1000 network devices: <ul style="list-style-type: none"> ◦ 2 CPUs with dual core or 4 CPU with single core ◦ 8 GB RAM and 16 GB swap space (recommended: 12 GB RAM and 24 GB swap) ◦ 60 GB free disk space • Up to 2500 network devices: <ul style="list-style-type: none"> ◦ 2 CPUs with quad core or 4 CPU with dual core ◦ 16 GB RAM and 32 GB swap space ◦ 60 GB free disk space • More than 2500 devices: <ul style="list-style-type: none"> ◦ 2 CPUs with 8 core or 4 CPU with quad core ◦ 16 GB RAM and 32 GB swap space ◦ 120 GB free disk space <p>LMS 4.2 supports the following virtualization systems for Windows:</p> <ul style="list-style-type: none"> • VMware ESX server 3.0.x • VMware ESX Server 3.5.x • VMware ESX Server 4.0.x • VMware ESX Server 4.1 • VMware ESXi Server 4.0 • VMware vSphere Hypervisor (ESXi Server 4.1) • VMware vSphere Hypervisor (ESXi Server 5.0) • VMware vSphere Hypervisor (ESXi server 5.5) • Hyper V Virtualization (as an installable in Windows 2008) <p>Note: VMware and Hyper V virtualization systems are not supported for the LMS 5000 and LMS 10,000 devices licenses, as these need 16 CPU cores, which is not possible to allocate per virtual machine (VM) instance.</p>
Solaris	<p>LMS 4.2 supports the following Solaris 10 releases:</p> <ul style="list-style-type: none"> • Solaris 10, 10/09 release • Solaris 10, 05/09 release • Solaris 10, 10/08 release • Solaris 10, 05/08 release • Solaris 10, 08/07 release • Solaris 10, 11/06 release <p>Minimum Server Requirements:</p>

System Type	Requirements
	<ul style="list-style-type: none"> • Up to 300 network devices: <ul style="list-style-type: none"> ◦ 1 CPU with dual core or 2 CPU with single core ◦ 4 GB RAM and 12 GB swap space (recommended: 8 GB RAM and 16 GB swap) ◦ 60 GB free disk space • Up to 1000 network devices: <ul style="list-style-type: none"> ◦ 2 CPUs with dual core or 4 CPU with single core ◦ 8 GB RAM and 16 GB swap space (recommended: 12 GB RAM and 24 GB swap) ◦ 60 GB free disk space • Up to 2500 network devices: <ul style="list-style-type: none"> ◦ 2 CPUs with quad core or 4 CPU with dual core ◦ 16 GB RAM and 32 GB swap space ◦ 60 GB free disk space • More than 2500 devices: <ul style="list-style-type: none"> ◦ 2 CPUs with 8 core or 4 CPU with quad core ◦ 16 GB RAM and 32 GB swap space ◦ 120 GB free disk space <p>Solaris zones (supported from Solaris 10):</p> <ul style="list-style-type: none"> • LMS 4.2 is installed on the global zone of the Solaris 10 operating system by default. • LMS 4.2 also supports installing LMS in the whole-root non global zone. • Sparse root zone is not supported. • There is no specific hardware or software requirement for zone support. LMS works in the same way in nonglobal zones as it does in the global zone. <p>LMS 4.2 also supports logical domains (LDOMs) and the ZFS file system.</p> <p>See the LMS 4.2 installation guide for more information on Solaris patches to be installed on these operating systems.</p>

Refer to the LMS 4.2 installation guide at <http://www.cisco.com/go/lms> for detailed server and client system requirements.

Cisco Unified Computing System Support

Cisco Prime LMS 4.2 is supported on the Cisco UCS B-series blade servers (B200-M1 or M2 and B250-M1 or M2) and C-series rack-mount servers (C200-M1 or M2, C210-M1 or M2, and C250-M1 or M2 and Cisco UCS C460).

The supported processor in Cisco UCS B-series blade servers is Intel Xeon 5500 or 5600 Series processors. For more information see http://www.cisco.com/en/US/prod/collateral/ps10265/ps10280/data_sheet_c78-524797_ps10279_Products_Data_Sheet.html.

The supported processor in Cisco UCS C-series rack-mount servers is Intel Xeon 5500 or 5600 Series processors with their choices mentioned explicitly. For more information see http://www.cisco.com/en/US/products/ps10493/products_data_sheets_list.html.

Refer to the LMS 4.2 installation guide at <http://www.cisco.com/go/lms> for more details on server sizing.

Ordering Information

Cisco Prime LMS is being sold as part of the Cisco Prime Infrastructure bundle. Availability, ordering, upgrade, and licensing options are described in the Cisco Prime Infrastructure ordering guide at <http://www.cisco.com/go/primeinfrastructure>.

Service and Support

Services from Cisco and Our Partners

Realize the full business value of your technology investments with smart, personalized services from Cisco and our partners. Backed by deep networking expertise and a broad ecosystem of partners, Cisco Services help enable you to successfully plan, build, and run your network as a powerful business platform. Whether you are looking to quickly seize new opportunities to meet rising customer expectations, improve operational efficiency to lower costs, mitigate risk, or accelerate growth, we have a service that can help you.

Technical Service Options

The Cisco Prime Infrastructure software products come with the Cisco 90-day software warranty. Purchasing a Cisco Application Support plus Upgrades (SASU) service provides benefits not available with warranty including access to maintenance releases, minor and major upgrades, online resources, and Technical Assistance Center support services.

The Cisco Prime physical appliance option comes with a Cisco 90-day hardware warranty. Adding a contract for a technical service offering, such as Cisco SMARTnet[®] Service, to your device coverage provides access to the Cisco Technical Assistance Center (TAC) and can provide a variety of hardware replacement options to meet critical business needs, updates for licensed operating system software, and registered access to the extensive Cisco.com knowledge base and support tools.

For more information about Cisco warranties, go to <http://www.cisco.com/go/warranty>.

For information about Cisco Technical Services, go to <http://www.cisco.com/go/ts>.

Existing LMS customers with Cisco Software Application Support (SAS) are encouraged to renew on the new Cisco Software Application Support plus Upgrades (SASU) offering provided by Cisco Prime Infrastructure.

For More Information

For more information about Cisco Prime Infrastructure and Cisco Prime LAN Management Solution, visit <http://www.cisco.com/go/primeinfrastructure>, contact your local Cisco account representative, or send an email to the product marketing group at ask-lms-team@cisco.com.



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